

# (12) United States Patent Friedrich et al.

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### (54) FLEXIBLE SPINE STABILIZATION SYSTEM

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#### (57)ABSTRACT

Systems and methods for flexibly stabilizing a vertebral motion segment by connecting a first vertebra and a second vertebra. The system includes an elongate connection element with end portions interconnected by a flexible coupling member. The system includes first and second attachment portions for connecting the connection element to the vertebrae. A first resilient member is positioned between the first end portion and the first attachment portion, and a second resilient member is positioned between the first attachment portion and the second attachment portion. The system is designed such that the second resilient member is compressed when the first and second attachment portions move towards each other, and the first resilient member is compressed when the first and second attachment portions extend away from each other.

## 20 Claims, 27 Drawing Sheets

